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863 Bladder and colon tensions give an infant little trouble. He simply evacuates when the pressure becomes strong enough. The mother makes no attempt at toilet training while the child is still an infant; she simply learns to anticipate his bowel and bladder movements, quickly lifting him from her lap and holding him over the earth floor. The feces are then wiped up with a leaf. Sometimes the mother does not lift the child quickly enough and he urinates on her leg. In such cases the leaf is again used, and the child is not held accountable for the mistake.

863 A mother prevents her infant from smearing. This indeed
• 861 is the only act for which I observed a Kwoma infant punished. One afternoon Suw defecated on his mother's leg. She moved him aside and called to an older child to fetch her a leaf. While this was being brought, Suw began dabbling in the feces and put some in his mouth. The mother contorted her face and said: "You must not play with feces; they are bad."[2] She rather roughly yanked Suw's hand from his mouth and held it. After I observed this case, I asked several informants whether it was a usual occurrence. They all insisted that it was not, maintaining that feces are naturally disgusting and even doubting that I had seen Suw behave in this manner. The fact that I did observe this behavior shows that, unless Suw was an exception, the disgust reaction is not so strong or innate as my informants believed it to be and indicates the probability that it was the product of cultural conditioning.

864 I have no direct evidence concerning the sexual behavior
[124] of Kwoma infants. I did not observe any infant masturbating; but I was only able to watch them during the afternoon visiting hours so that the evidence is inconclusive. However,

[192] [2] The word used in this connection is *kafwa sok*, which is a term meaning
[196] bad, nasty, disgusting, rotten, and the like. A facial expression of disgust
[754] usually accompanies its use. *Kafwa* is a word which refers to a white substance reputedly used by certain sorcerers to poison their victims. I was once shown the flyblows on a dead dog and told that this was *kafwa* and proof that the dog had been killed by sorcery. *Sok* may be related to the verb *soka*, which means "to grow." The punishment in this case applied to eating as well as to playing with feces and was thus a restriction on eating habits.

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854 him into a more comfortable position. If he seems to be crying because he is sick, she tries to distract his attention by
[524] crooning to him, rocking him gently, and patting him. One mother, by putting a stone in a tin can, had invented a rattle which she used in these circumstances. Each time a mother reacts to her child's crying by discovering and removing the source of discomfort, she rewards this response in her child. The situation in Kwoma is such that, for the young infant, crying is followed by the alleviation of pain more frequently than is any other response.

When the infant begins to talk, he learns an even more efficient technique for securing help. A mother does not always know the trouble when her infant cries, but his words elicit immediate and appropriate help. A Kwoma infant who has learned to speak may say, "Mother, my back itches," or
• [861] "I am cold; warm me." The mother rewards these demands by removing the source of discomfort. This indicates one of the advantages of learning language and hence why an infant is motivated to do so.

856 Thus during infancy the response to discomfort which is most strongly established is that of seeking help by crying or asking for it. Responses such as approaching the breast, moving to avoid pains, and other independent acts are also established. They form a basis for later learning, but hold a less important position in the response repertory of an infant than that of seeking help.

854 A motive which becomes strongly established during infancy is the wish to be near to and touch the mother. Almost all the pains and discomforts which an infant experiences are reduced while he is either sitting in his mother's lap or lying by her side. He is fed there, he sleeps there, and he is warmed and cooled, scratched and petted there—always while in bodily contact with his mother. The following case indicates the strong attachment that an infant has for his
854 mother's lap and how loath he is to leave it. Mbora one after-
866 noon was teaching her infant son Suw to venture from her lap. She was rolling a ball a little way from her and then

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putting Suw down and gently urging him to retrieve it. He crawled a few feet toward the ball and then returned to his mother. She took him back into her lap and rocked him in her arms and patted him for a while. She then asked someone for the ball and let Suw play with it. Then she rolled it away again and told him to go get it. This time he retrieved the ball and was again rewarded. During weaning, as we shall see, the strength of this desire to touch and be near the mother is even more clearly demonstrated.

An infant's reaction to the social environment is pleasant but limited. Except for smearing he is rarely punished.* Since, moreover, almost all his needs are satisfied by the help of his mother, he inevitably develops a strong attachment to her. By comparison, other persons are relatively unimportant in his life. His father sometimes picks him up and holds him for a few minutes to display him to a visitor, but he soon returns the child to his mother, especially if he starts to cry. A mother never entrusts her young infant to an older brother or sister to hold, even for a short while, unless she is near to supervise. Next to the mother herself, her co-wife cares for a child more frequently than any other person. It is she who usually holds the infant when the mother needs a short respite from the constant care. The only other persons who are allowed to touch the child are its grandparents, its father's *brothers* and *sisters*, its *mother's brothers*, and the spouses of these persons; but to be held by them is a rare occurrence. The mother stands out as by far the most important figure in the infant's life—a person essential to his very existence.

Sickness is the chief source of anxiety for a Kwoma infant. The mother, successful in bringing about the reduction of other discomforts, knows no efficient means of coping with most of the diseases which her child contracts. Indeed, one method employed to cure minor ills increases the infant's pain instead of reducing it. If he complains of a headache

* Masturbation and biting the mother's nipple may be two other exceptions to the rule of complete facilitation. All informants stated firmly that an infant is never punished.

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shortly. Kum kept on shouting until finally his mother 866
stopped answering him. Then he began to wail. His older *brothers*, who were playing ball a short distance away, told him to be quiet. His stepmother, who was working in the house, after several times telling him to hush, finally gave him a scolding.

During the weaning period a child continues to receive help from his mother if he is in grave danger or sick. If he contracts malaria or some other serious disease, she will take him back into her lap and minister to him. If he has a head- [757]
ache or stomach-ache, she attempts to cure him by phlebotomy. When Kum once got lost in the forest, his mother and both his *brothers*, guided by his cries, searched until they found him and brought him home. Thus a child must learn to discriminate between serious dangers and minor pains. Demanding is still successful as a response to the former situation, but it is necessary to discover a new mode of coping with the latter.

Parents and older siblings teach a child to anticipate pain. They point out dangers so that he may avoid them before he is hurt. They warn him about snakes, scorpions, nettles, and other objects in the natural environment that may injure him. He soon discovers that if he does not heed their warnings, the predicted pain does follow, and so he learns to heed them.

Parents and older siblings extend their warnings to in- 869
clude supernatural dangers. They tell the child that huge, 866
snakelike monsters which cause storms dwell in the swamp, and that it is dangerous to go near their dwelling places. This danger is brought within the sphere of experience of [862]
the child when his mother tells him that a *marsalai* occupies her breast and vivifies the story by putting a leech on it. A child is also warned during the weaning period not to venture out at night, for this is the time when ghosts are abroad; and not to go too far from the house unless accompanied by an older person, for if he does a sorcerer may kill him.

A child at this age also learns that people as well as the 861

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861 natural environment may inflict pain upon him. His parents push him around, scold him, and sometimes even spank him.[1] They strike hard enough to give meaning to their commands and scolding, but not hard enough to injure him. His older siblings also scold and punish him. He learns to respond to punishments with two special forms of behavior: obeying and escaping. He learns that if he does as he is told he will not be punished. He also learns that if he runs away when someone threatens him he is less likely to be hit. Kum was playing with a broom one afternoon and started to take it out from under the porch. His older *sister* noticed this and told him to bring it back, starting toward him threateningly. Kum dropped the broom and ran. The *sister* did not pursue him.

866 862 Thus during the weaning period, except when he is in serious danger, a child is forced to give up demanding as the preferred response and must learn new and independent habits. He is aided in this learning by warnings from his parents [869] and older siblings. These warnings are extended to include beliefs about supernatural dangers. Finally, it is during this period that a child begins to experience pain from other persons and learns to obey commands and to escape from threats.

866 862 152 Weaning greatly increases a child's experience of anxiety. His desire to sit in his mother's lap and his fear of being pushed away and scolded for it, the desire to suckle and the belief that there is a *marsalai* in his mother's breast, the wish for his demands to be heeded and the punishments he receives for crying, all are anxiety-producing sources of conflict. As has already been shown, obeying, escaping, and learning new habits are the means by which he reduces these anxieties. Sickness, however, remains an unresolved source of anxiety.

865 Aggression still plays a minor rôle in the life of a Kwoma during the weaning period. In some ways aggressive behavior is less successful at this time than it was during infancy. Although the child becomes more adept at killing mosquitoes

[1] Kwoma parents customarily spank their children by striking them between the shoulder blades with their open hands. They do not hold the child, but chase him if he attempts to escape. The child is usually able to elude the parent after one or two blows have fallen.

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CHAPTER IV

CHILDHOOD

857 858 WHEN the child[1] has relinquished his attempts to recapture the preferred habits of infancy, his mother gives him a little bag which she has netted for him and his father the betel-chewing accoutrements to go with it. They tell him that he has become a little man. He now turns to the play group and spends his time playing games with other children, roaming in the forest, and participating to some extent in adult activities. The sexes avoid each other from this time, the boys and the girls forming separate play groups.

824 825 861 262 [524] The widening of a boy's contact with the environment necessitates new discriminations about the edibility of things. While playing in the forest he comes across luscious-looking berries which may cause his death if he does not know that they are poisonous. Kwoma boys play a game in which they kill lizards and snakes and cook and eat them in a playhouse[2] in the jungle. Some of these reptiles are good to eat; others are poisonous. The parents warn the child about the objects that are poisonous. When I went for a walk with a native, he would frequently point out some class of objects to be avoided. Children were as likely to teach me as adults. Once a little girl of eight was scathing in her comments about me because I did not know that a certain berry was not good to eat. Although I observed no specific example of an older sibling using this technique on a younger one, I feel confident that it occurred rather frequently. In any case, the training

[115] [123] [1] Mey, Fit, Kwos, Gwamp, Ham, and Hamb—boys, and Afi, Buka, Haya, Toka, Kayamaka, and Yawa—girls, constituted the personnel of the childhood age group of Rumbima hamlet. Mey, Fit, Kwos, and Ham spent much of their time running in and out of my house and playing near by and therefore provided most of the observational data on the boys in this age group. Afi and Buka, who lived in houses next to mine, provided most of the data on girls.

[2] A rough bough hut which children construct for play.

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of Kwoma children is very effective in this respect. Errors and warnings sharply differentiate the things in the environment which may, and those which may not, be eaten, with the result that Kwoma children show a remarkable knowledge of the local flora and fauna.

Parents provide their children with a general formula to keep them from eating harmful food. The formula is: if you do not know a thing is good to eat, do not try it. I have no data on how this fear of strangeness is transmitted to the child, but I did observe the fact that children generally reacted with fear to strange objects and persons.

A Kwoma child learns that, in addition to things naturally inedible, there are also foods which are made poisonous by sorcerers. Boys and girls are told never to eat food given them by a stranger or a non-relative, for it may be poisoned by the insertion of a magical white powder. As an example of parental training on this point, Wof refused to allow Mey and Fit to eat at my house because I bought bananas, pawpaws, yas, and other vegetables from people of other hamlets. He also warned us not to eat this food, for we might have enemies in the tribe who would try to poison us. Another illustration of the manner in which this eating restriction is inculcated occurred when Marok's dog died. It was his best hunting dog, and both he and his wife and sister were very fond of the animal. When it died, they wailed as they would have done for a member of the family. It died early one morning, and the women mourned throughout the day. By afternoon flies had gathered about the dead animal and laid their eggs upon it. Mey, Fit, and Buka were with me when Marok pointed to these flyblows and told me that this was the poisonous white powder which sorcerers use. This was definite proof, he said, that someone had tried to poison him or one of his family, but that the unfortunate dog had eaten the food instead and died as a result. All the children of the hamlet soon knew the imputed cause of the dog's death, and it is probable that this knowledge served to strengthen their fear of food not prepared by relatives.

A child is warned about another type of sorcery which also

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868 himself and his dependents. Thus, during childhood, he begins to participate in the hunting, gardening, and collecting occupations of his parents.

Even as an infant a Kwoma has begun his training in working for food by learning to clamber to his mother's breast. Later, during weaning, habits of helping himself to food and eating have been developed. Now the whole cycle of planting and harvesting, hunting and fishing, collecting and processing, unfolds before him, and little by little he learns to participate in one or another segment of these activities.

[252] A child learns that most of his food must be cooked before he can eat it and that if he wishes to eat between meals he [264] must learn this technique himself. At any time of the day [372] boys may roast a bunch of plantains or a breadfruit. Sometimes they build up the fire on the hearth of their mother or older sister, but more frequently they cook their snacks in groups of two or three in the forest. They learn to cook by watching and imitating their mother, and by trial and error.

• [86] Girls, in addition to this, are specifically trained. They are told by their mothers what to do and criticized if they do not do it correctly. Boys also receive some specific training if they try some of the more complicated dishes such as gruel or 868 soup. Both girls and boys are expected to help their mother 857 when she is cooking the main meal, standing ready to pass [415] her a utensil or to fetch the bamboo water container. She is severe with her children for negligence in helping her, scolding them if they do not carry out her orders. Kaya, for example, severely reprimanded Mey for bringing her the old mixing sticks when she wanted the new ones.

[312] Since water and firewood are necessary for cooking, a sup- [313] ply must be kept constantly to hand. This is woman's work, [462] and consequently does not affect the boys.[6] A girl in the childhood age group accompanies her mother to the spring and brings back a small bamboo of water, and also forages for firewood with her mother. Older girls, though still in the childhood age group, are often given the responsibility of

[6] A boy will occasionally help his sister fetch water or firewood as a favor to her, but not as a duty.

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getting the wood or water on days when their mothers are busy with some other task, and are punished if they do not. One day Buka forgot to get firewood, and Wof, her father, beat her for her negligence, when he returned and found none.

Children of both sexes participate in the work of gardening[7] by helping to clear the site. It is their duty, together with the women and old men, to clear the ground of underbrush while the adult men are in the treetops lopping off the branches. In contrast to some of the other gardening tasks reported later, children are expected to help with this work and are scolded by their parents and older siblings if they do not. Toward the end of childhood the boys are allowed to climb some of the smaller trees and try their hand at "man's" work.

In the process of breaking the ground and planting, the children usually accompany their parents to the garden site and watch the work. The older children sometimes help by putting the seed beside the hills. The younger ones, on the other hand, are likely to get bored and to retire to the edge of the forest to play. Children are forbidden actually to put seed yams in the ground, for only an adult who has been elected to *Nokwi*[8] may do this. When the yam shoots break the ground and it is time to hang stringers up which the vines may climb, the family again goes to the garden, the women carrying the split liana stringers and the men draping them from tree limbs. The older girls help their mothers by carrying a small bundle, the boys their fathers and older brothers by keeping them supplied with lianas. If the boys get tired of this and wish to play, the men carry on by themselves. Ham and Mey, for instance, on one occasion helped for about an hour and played during the rest of the morning. Weeding is the responsibility of adult women, and girls only help if they wish to. When the yams are harvested the children render more effective assistance, the boys in picking

[7] Gardening and other economic tasks in which the child participates will be described in more detail in succeeding chapters.

[8] *Nokwi* is the highest stage of the yam cult.

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dangerous. Children compensate for the taboo against the use of real spears by playing several dart-throwing games. A favorite sport of this type consists in tossing a pawpaw* up a slope and attempting to transfix it with a sharpened bamboo dart as it bounds down. In another common game, children toss a rock into the air and try to hit it with stones before it falls to the ground. As a result of such games, they become very adept at hitting moving objects, a habit which stands them in good stead when they become old enough to go pig-hunting.

Kwoma children participate in caring for the domesticated animals of their parents. They are given a small pig of their own to tend which they must feed, habituate to the dwelling, and teach to come at their call. Parents often give their child a puppy to pet and care for. A child calls his pets by the kinship term for *son* or *daughter;* the other members of the family refer to the pet by kin terms which accord with this relationship.

Fishing is considered by the Kwoma rather as a sport than as a serious activity. Girls participate in what little is done, often simply scooping fish from a swamp pool or mountain stream with their hands. Although men do not deign to waste their time fishing, boys sometimes accompany their mothers and sisters to the stream and join in the fun. Even as children, however, they feel that they somewhat demean themselves by doing this.

Children watch their parents make tools but do little such work themselves. Boys sometimes help their parents by fetching materials for various utensils, and girls begin netting bags before they reach adolescence, but otherwise toolmaking is restricted to older persons.

In general, the Kwoma child discovers that it is necessary to work to get food, and learns, in part by observation and in part by participation, the techniques that have been developed in the culture for producing it. He is forced to assume responsibility for some of this work, is allowed to help with

* A tropical fruit about the size, shape, and consistency of a small muskmelon.

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861 868 857 other tasks if he wishes, and is definitely debarred from still others. Although this work is directed toward the satisfaction of hunger, the children cannot always appreciate this and must be coerced. A Kwoma does not take full responsibility for many of the tasks until adolescence; then he learns by experience that no work means no food. The coercion, as we have seen, consists in scolding or beating the child for not doing the tasks expected of him, and in warning him of the dire consequences which follow an undesired act.

863 Cleanliness habits are usually already established by the time a boy or girl reaches childhood. Informants stated that if a slip occurs it is the child's own business except that he is forced to clean up after himself. The following example indicates how sanctions actually operated in a case of enuresis. One night, when the mosquitoes were very bad, Buka, a girl about eight years old, slept with her mother, older sister, and younger brother in the screened room in my house. The next morning I found a puddle on the floor. Soon after breakfast the two young girls came in shamefacedly and offered to clean up. They lied to me, saying that Kum had wet the floor and that they were going to punish him for it. While they were carrying out the rug, their *paternal uncle* came in, scolded Buka, and beat her. She cried and ran home. The uncle then told me that it was Buka's own business if she wet the bed as long as she cleaned up after herself. He said that he would not have scolded her if she had done it at home, but wetting my floor was an insult to me which must be punished. Several of the onlookers referred to the act as that of an infant and said that she was old enough to know better.

864 Sexual conditioning begins in earnest during childhood. A boy is punished for looking at the genitals of any female. He is scolded and even beaten if he does this, the person at whom he looks usually being the one who does the punishing. Informants stated that learning takes place primarily with respect to the mother and sisters because they are the females with whom the boy comes most frequently in contact. When a woman scolds a boy for staring at her, she tells him that he should not look at her genitals because they are her private

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may learn to avoid or kill a scorpion even though he has never been bitten by one. So it is with other dangers, especially the more serious ones; if children were permitted to learn to avoid wild boars or crocodiles by actually experiencing pain from them, the society would soon disappear. Parental warnings come true frequently enough so that children usually heed them. 866

A child is not permitted to show excessive fear of his environment. If he is too afraid of a small snake or lizard to kill it, or if he is afraid to walk in the swamp lest he be pricked by a thorn, his older *brothers* will tease him and his parents will scold him. An overanxious child is usually called a "baby" in a derogatory manner. [861]

The warnings of parents and older siblings include supernatural dangers. A child is taught that certain glens, springs, rocks, and trees are dwelling places of *marsalai*, and he learns the names of the supernatural beings who inhabit them. He is warned that, if he goes too near one of these places, the monster will cause a violent storm and high wind that may blow down the dwelling of his parents, or it will "shoot" a sago needle into his foot for disturbing it. Such a needle, although invisible, is very painful and can be removed only by adult operators who have mastered the special magical technique. Actual storms and unseen needles are used to impress the validity of these beliefs upon the child. Whenever there is a severe storm, the adults in the hamlet speculate as to who has disturbed the *marsalai*. Was it Yat who was clearing a garden too near to the rock in which Kumbundum dwelt, or was it Wof who went hunting near the bog inhabited by Kurumbukwas? Similarly when a child reported that he had a pain in his foot which felt like a thorn but which he could not see, his parents would say: "There, you see. You have been 'shot' by a *marsalai*. We told you to beware of disturbing them." 869 776

A child is warned that he should not go near the house tamberan while the yam-cult ceremonies are being held. He is told that at this time the adult men of the tribe consort with *marsalai*. He is warned that although men can do so 869

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tell him that the owner of a garden usually casts a spell on it so that anyone who enters it will be afflicted in this way. 869 789

Ghost lore is taught during childhood. The child is told that the spirits of the dead live on a mountain at the edge of the tribal territory, where they lead a topsy-turvy existence. They go by canoe on land and walk upon the water; they sleep by day and venture out at night. Often they assume the shape of a bird or beast. After dark they are attracted by whistling. They frequent a corpse, especially just after death. A child is warned that a ghost is dangerous, and is taught that it is the wish of ghosts to take his soul to the land of the dead. Close contact with them is therefore also dangerous,[11] and a child is told not to go near a burial platform. Sometimes ghosts appear in nightmares and struggle to take the soul of the dreamer. Sometimes they possess people and make them irresponsible for their actions. In these cases a child is taught to be aggressive toward the ghost. When a person is possessed or has a nightmare, those who are present at the time, children included, beat the air with sticks and shout curses and commands at the ghost in order to frighten him away. 869 775

A child is punished if he does not heed the warnings of his parents and older siblings. This holds in both the natural and the supernatural spheres. Since I did not know the culture, I was, in a sense, in the status of a child. One day when I was walking in the swamp with Kar and Gwiyap, they pointed out a water hole that was supposed to be the dwelling place of a *marsalai*. I poked my walking stick into it. Kar shouted at me to take it out, then told me very seriously of the danger of doing such a thing. Gwiyap joined in the scolding. 861 123

The following case illustrates strikingly the punishment of a child for not heeding a warning. When some of my shotgun shells spoiled, I cut off the shot and lit the powder, which went off with a puff and amused the natives. Kwos, one of the

[11] The belief that all death is due to sorcery is somewhat contradictory to this. The Kwoma are not very specific about the mechanism of death, but unless a person is sorcerized a ghost cannot succeed in taking the soul. Ghosts are nevertheless feared. [761]

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861 123 children in the hamlet, saw me doing this, stole some shells, and tried to do it himself. His older brother, Mes, saw him and told him that shells were dangerous and that he had better not fool with them. Kwos paid no heed. He tried to light the shell, but it did not go off and he looked to see what the trouble was. At that moment the powder exploded, seriously burning one side of his face and closing one eye. Mes scolded him severely: "I told you not to play with those shells. Why didn't you heed me?" His father also scolded him: "You will probably go blind, but it is your own fault. Why didn't you heed your brother? He told you not to play with the shells." No one in the hamlet expressed sympathy for Kwos's injury; everyone blamed him.

861 The number of punishments that a Kwoma receives from other persons increases markedly in childhood. He is frequently beaten and scolded by his parents and other persons of their generation. They order him to do household chores and scold him for being lax about them. They shout at son or daughter, nephew or niece, to stop yelling and rushing around the house when they are resting or trying to carry on a conversation. They scold the child for snooping into cult secrets, for not helping a *brother* who needs aid, or for damaging the household property. One afternoon Ham was wandering about under the porch of Wof, his *paternal uncle*. The latter, irritable because of an argument that he was having with his wife, roared at Ham to sit down. Ham dropped as though he were shot, and Wof began scolding him severely. He accused Ham of being a little thief and of trying to steal something. Ham began to cry and as soon as he dared got up and ran home. The incidents of Wof beating his daughter for not getting the firewood, and that of Kwiya scolding Mey for not passing the proper mixing sticks, have already been reported.

861 602 A child is kicked and beaten, scolded and teased, by his older siblings even more than by his parents. Older siblings imitate their parents, commanding, scolding, and punishing their younger *brothers* and *sisters*. Older *sisters* punish a boy if they see him with an erection, a girl if she sits immodestly.

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Older *brothers* scold younger *brothers* for showing a precocious knowledge of cult affairs, or for not heeding their warnings and younger *sisters* for annoying them or for not carrying out their household chores properly. 861 602

A boy is most frequently hurt by his older *brothers* in the course of games. The most popular sport consisted in kicking a pith ball up a slight slope against the side of a house and then, when it rolled down, kicking it back up again. In this, as well as in the dart-throwing and "homosexual" games, the older and bigger boys tease the younger one and knock him out of the way when he interferes. They order him to retrieve the ball or the pawpaw when it bounds into the bushes, or to throw the target rock for them. In the "homosexual" game it is the smaller boy who is usually at the bottom of the pile and who is called "wife" by the older boys. 861 524 [602]

A child becomes adept at avoiding punishment from older persons by obeying, escaping, lying, and being secretive. He learns that if he does not do what he is told, a blow will follow; that if he persists in doing what he is told not to do, he will be beaten. Thus he not only learns to obey commands, but also to anticipate the commands, that is, to follow custom. He also learns that, if he has disobeyed, he can often escape punishment by running away from the person who has issued the command, or by lying if someone accuses him of doing something wrong. Finally, he learns that he can do things of which the older people disapprove, if they do not observe him. He therefore learns to be secretive. Smoking in the bush house is one example. Masturbation may be another. A child also learns secretly to beat cult-gong rhythms, being careful that no older person is present when he practices. Kwoma parents do not punish a child for lying or being secretive; they only punish him if the misdemeanor is discovered. Children therefore become very adept in these arts of deception. 861

A child has his first success in social aggression toward his younger siblings. They, being smaller than he, are easily overcome when they threaten or interfere with him. When they get in his way in games, it is not difficult to shove them 865 602

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tive girl, verbal permission from her, the environmental scene which has both public and secluded spots, etc.; the reward is sexual orgasm, satisfaction of sex appetite, and anxiety reduction. The adult habit of beating gongs against sorcery when a relative becomes ill may be used as a final illustration of the paradigm. The man's drives in this case are fear that he, too, may become ill unless the sorcery is stopped, fear that his relatives may die, and anger at the sorcerer; the response is going to the house tamberan and beating the gongs in a particular way; the cues are those which indicate that a relative is sick; and the reward is a reduction in fear and anger. Thus, although the habits become more and more complex[12] as the individual matures, the four essentials of learning and performance pertain to the behavior of individuals of all ages.

A Kwoma child learns but a small part of his cultural habits by free trial and error, that is, without some member of his society guiding and directing him.[13] Were he to do so, he would learn those habits which were most rewarding to him and to him alone.[14] This, however, is not what actually happens. He is forced to learn, not the habits which might be most rewarding to him alone, but the habits which are specified in the culture as being best. For generations before his birth his forbears have tried various ways of dealing with one another and with their environment. Those habits which were successful have persisted in the form of customs, while those which have failed have either suffered extinction or passed out of existence with the untimely death of those who

[12] It is not the particular purpose of this chapter to detail how complex habits are learned, although this is a crucial problem. Hull has suggested a very important mechanism as a partial explanation in his theory of the assembly of behavior segments. This theory, together with the integration of habits on a cultural level, should go far toward the solution of the problem. See C. L. Hull, "The Mechanism of the Assembly of Behavior Segments in Novel Combinations Suitable for Problem Solution," *Psychol. Rev.*, XLII (1935), 219-245.

[13] Limited trial and error operate in nearly all learning situations. The concept of free trial and error is used here to mean learning which takes place without the guidance or interference of any other person.

[14] See C. L. Hull, "The Concept of the Habit-Family Hierarchy and Maze Learning," *Psychol. Rev.*, XLI (1934), 33-54, 134-152.

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tried them.[18] For various reasons this accumulation of adaptive habits is passed on to the child. He does not simply learn to get along in the world; he is socialized. Thus an essential set of conditions for social learning is the behavior of the socializing agents. The remainder of this chapter will be devoted to an analysis of these conditions and their relation to social learning.

Before the analysis of teaching techniques is undertaken, several terms which are to be used should be defined. The terms "teacher" and "pupil" will be employed in a special sense, the former to mean anyone who attempts to change the habit structure of another person, the latter, any person whose habit structure is being so changed. Although Kwoma parents most frequently play the rôle of teacher, with their children as pupils, the teacher-pupil relation is not by any means restricted to them. Co-mothers, siblings, *paternal uncles* and *aunts*, and other relatives frequently play the rôle of teacher as well. The concept of teacher will also be extended in this context even to an adult who tries to influence the behavior of another adult. Although such behavior may be considered an act of aggression or coöperation, as the case may be, it is also a teacher-pupil relationship if a habit of the pupil is thereby strengthened or weakened.

A second set of terms will be used for responses, which will be characterized as "right," "not right," "wrong," and "not wrong." A right response is a specific act which the teacher wishes the pupil to make, whereas not right responses are all those acts which are incompatible with the right response under the given conditions. Similarly, a wrong response is a specific act which the teacher wishes the pupil not to make, and not wrong responses are all those acts which are incompatible with the wrong response under the given circumstances. These concepts may be illustrated from the cases which will be reported in detail below. When Wof punished Buka for failing to gather firewood, "getting firewood" was the right response, while playing, sleeping, eating, gossiping,

[18] See A. G. Keller, *Societal Evolution* (New York, 1929); W. G. Sumner, *Folkways* (Boston, 1906), chap. v.

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or any other response which Buka might make when she should be getting firewood can be described as not right responses. When Mes warned Kwos not to play with a cartridge, "playing with the cartridge" was the wrong response, while doing anything else would be the not wrong responses. Teachers normally describe the specific act, whether it be right or wrong, and refer to the not right or not wrong responses as the negative of the specific act. Sometimes they exemplify the not right or not wrong, by stating a specific act in the negative category. For example, in the above cases Wof may have specified playing as one of the not right acts which Buka did, or Mes might have specified joining the play group as a not wrong response. Teachers normally try to make their pupils learn to make a right response or to make a not wrong response. The other two categories, not right and wrong, denote behavior which the teacher wishes to prevent, but which he can prevent only by teaching the pupil an incompatible habit, i.e., right or not wrong, respectively. This will be illustrated in the cases to be analyzed below.

In socializing their pupils, Kwoma teachers use various techniques, all of which make practical use of the paradigm of learning presented above.[16] Some of these techniques stress motivation, some the response, some the cues, and some the rewards, but the whole process is implicit in all of them. Kwoma teachers use different techniques for different situations; the kind of habit to be taught, the age and maturity of the pupil, and the kin relationship between teacher and pupil are some of the factors that determine which technique shall be used. The following presentation does not purport to be a complete list of the methods of teaching employed at Kwoma nor a full account of the situations in which they are used, but is rather an analysis and description of the more important ones observed.[17]

[16] Since pupils in our society learn by the same mechanisms as do Kwoma pupils, it is not surprising that many of the techniques of teaching in the two societies are similar. In fact, the following techniques will seem quite obvious to anyone who has been either a parent or a teacher.

[17] The following theory of teaching techniques was not worked out before the data were gathered. For this reason the cases analyzed below were not

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Unless the essentials for learning are already provided by the interaction of the environment and the pupil, they must be supplied by the teacher. In other words, when such conditions are not already present, the teacher, in order to change the habit structure of the pupil in the desired manner, must provide *motivation*, *guidance*, and *reward*. Each of the various teaching techniques employed at Kwoma may be classed under one or another of these three categories. The following table presents this classification:

1. Providing motivation
   - *a.* punishing
   - *b.* scolding
   - *c.* threatening
   - *d.* warning
   - *e.* inciting
2. Providing guidance
   - *a.* leading
   - *b.* instructing
   - *c.* demonstrating
3. Providing reward
   - *a.* giving
   - *b.* helping
   - *c.* praising

A Kwoma teacher must often provide motivation in order to make his pupils learn the habits which he wishes to teach them. He employs five techniques for doing so: punishing, scolding, threatening, warning, and inciting.

Punishment is not infrequently employed by a Kwoma teacher when other methods fail to correct the behavior of a pupil or when his behavior is particularly annoying to the teacher. A teacher punishes a child after he has made a wrong, or a not right response. The mode of punishment is usually either a blow on the back with the fist or a blow on the legs with a stick. The following cases will serve to illustrate its use.

Wof left early one morning with his second wife, Chinuwa, to work in his garden. Since his first wife, Kaya, had previ-

[129] carefully followed up, and observations with which to test the predictions arising from the analysis were frequently not made. The rather complete record of daily events which was kept did, however, provide data to check some of them.

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ously sprained her ankle and was incapacitated, he told his adopted daughter, Buka, to replenish the supply of firewood, which was very low. When he returned late that afternoon, he discovered that Buka had not obeyed his command and that there was not even enough wood to cook the afternoon meal. He, therefore, called to Buka and, telling her that she was lazy and disobedient for not getting the wood, struck her several times on the back. Buka cowered and ran away crying. Wof continued for some time to scold her in a loud and angry voice. Since I observed her a few days thereafter going by my house with her net bag filled with firewood, the punishment was presumably effective.

In order not to make the error of taking the effect of punishment on the habit structure of a pupil for granted, it is expedient to analyze the above case in detail in accordance with the paradigm of learning. It can be seen from such an analysis that the drive was that of pain from a blow on the back; the responses were running away, and crying; the cues were the sight of Wof, his words of criticism for not having obeyed his command to get firewood, and the memory of his command; the reward was escape from the pain of the blow. From this analysis it is evident that the habit which was reinforced was that of running away and crying when the cues described above were present. Wof, presumably, did not wish to teach her this habit but rather that of getting the firewood when he told her to. Although the punishment evidently did have this effect, it has not yet been shown how this came about. It is necessary to introduce the principle of anticipation to explain it.

By the principle of anticipation[18] any response which is attached by reward to the last of a temporal series of cues tends to occur earlier in the series. Thus when Wof again commands Buka to get firewood she will have a tendency to run away, to cry, and to make various visceral responses induced by pain. In other words she will have anxiety.[19] If she

[18] C. L. Hull, "Goal Attraction and Directing Ideas Conceived as Habit Phenomena," *Psychol. Rev.*, XXXVIII (1931), 487-506.

[19] Freud defines anxiety as the anticipation of pain. See S. Freud, *The*

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[121] were to run away or cry under these circumstances, she would
• [86] be doing something other than getting firewood. In other words she would be making not right responses as implied by Wof's statement of the reason for the punishment at the time of its occurrence. To run away and cry would therefore tend to raise her anxiety rather than to reduce it. Similarly, if she played, went to sleep, ate, or made any response other than getting firewood, her anxiety would not be reduced, for all such acts have been implicitly defined by her father as "not getting firewood responses." The only way in which she can reduce her anxiety is to get the firewood. When she does this and only when she does this, the real effect of punishment as a teaching technique becomes clear. The drive is anxiety; the response is getting firewood; the cue is her father's command; and the reward is the reduction of anxiety. It is thus that Wof's punishment was not in vain and did accomplish the effect that he desired.

The following case also illustrates the use of punishment by a Kwoma teacher. One afternoon, when several Runabima children and adolescents were playing in front of my house, the ball which they were kicking bounded into the bushes. Gwiyap, an adolescent, commanded Ham, a child, to fetch it, and when he refused kicked him in the buttocks. Ham ran away crying. Several days later the situation was repeated, and this time Ham ran away as soon as Gwiyap issued the command. Weeks later I observed Ham obediently fetch the ball, at first only after he was ordered to and later on his own initiative.

In the above case the drive was the pain from Gwiyap's kick; the response was running away and crying; the cues were the ball in the bushes, the sight of Gwiyap, and the sound of his commands; the reward was escape from the pain

[113] *Problem of Anxiety* (New York, 1936). O. H. Mowrer has developed this thesis and urged that anxiety is a learned response based upon an anticipatory response to pain. See O. H. Mowrer, "A Stimulus Response Analysis of Anxiety," *Psychol. Rev.*, XLVI (1939), 553–565. Miller has shown that the acquired drive value of anxiety is based upon the response-produced stimuli of an antedating pain reaction. See N. E. Miller and John Dollard, *Social Learning and Imitation* (New Haven, 1941), chap. iv.

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of being kicked. From the principle of reinforcement it could be predicted that Ham would learn to run away when these cues were again present. Observation bore this out. It could further be predicted that he was also reinforced on this occasion, the reward being escape from anxiety. However, just as Wof presumably did not wish to teach Buka to run away, so Gwiyap wanted to teach Ham to fetch the ball for him rather than to escape. That he was successful in doing so remains to be explained. It has been shown in a previous chapter that Kwoma children spend most of their time playing with other children, an activity which is apparently rewarding to them and hence one which comes to have the value of an acquired reward. Exclusion from playing with one's fellows should thus have an acquired drive value. There is no evidence that Ham was exceptional in these respects. Therefore each time that he ran away, although by so doing he achieved the reward of the reduction of pain or anxiety, he was thrown into another situation of discomfort. The acquired drive to play with his fellows was aroused. This placed him in a conflict situation:[20] to play aroused the fear of being kicked; not to play aroused the discomfort arising from being excluded from the game. Ham finally solved this dilemma by obeying Gwiyap's command. On this occasion, if the above analysis is correct, the drives were the fear of being kicked and the wish to play with his fellows; the response was fetching the ball; the cues were the ball in the bushes and Gwiyap's command; and the rewards were escape from being kicked and joining in the ball game. Thus Gwiyap's kick finally did have the desired effect, but only after time had elapsed and after a rather complicated series of psychological events had occurred to Ham.

This analysis suggests that another factor may have been operating in the case of Wof and Buka. She might have learned not only to run away from Wof, but to stay away from him. Unless some relative were willing to care for her,

[20] For a discussion of the factors governing conflict see N. E. Miller and J. S. Brown, "Conflict, an Analysis of Approach and Avoidance" (in preparation).

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121 • 861 however, she would be in the same dilemma as the one in which Ham was placed, the negative side being much more serious, since it would be impossible for a girl of Buka's age to live alone in the Kwoma environment. Thus it is apparent that the primary effect of physical punishment is to make a pupil run away,[21] but that the strong acquired reward value which teachers have for the pupil, as a result of his dependence on them, and the fear of being alone, bind him to the teacher until he learns the habit which the teacher has wished to instill in him.

In the cases analyzed above the teacher was bigger than the pupil. When teacher and pupil are of the same size or when the pupil is bigger than the teacher, the response to punishment is often counterattack rather than running away.[22] The case of Fit and Mey illustrates this. Fit struck Mey for teasing him, and Mey grabbed a burning brand from the fire and began belaboring Fit with it. In this case Mey's drives were pain from Fit's blow, anger at Fit,[23] and the fear of being hit again; the response was attacking him with a firebrand; the cues were the sight of someone his own size and the feeling of the blow; and the rewards were reduction of the pain from Fit's blow, the reduction of the fear of being hit again, and the reduction of anger. Thus Mey was

[21] In the middle and upper classes of American society, pupils are not usually permitted to run away from punishment. They are either held by the parent or punished more severely if they attempt to escape. The usual response which is reinforced is the promise "I won't do it again." Furthermore, doing wrong in secret is more severely punished in the United States than at Kwoma. The American technique should be more effective in teaching the correct response, but, at the same time, it should produce more anxiety in the pupil than does the Kwoma technique. A correlation of the extent to which parents in various societies permit children to escape punishment and do wrong in secret, and the degree to which the society produces neurotic adults might be fruitful.

[22] When such a situation arises between adults, it is normally the reputation of the teacher and the pupil as fighters and the size of the group which supports each of them, rather than their physical size, which determines whether the pupil counterattacks or runs away.

[23] The conditions at Kwoma are such that anger as a response to pain is frequently reinforced, particularly with respect to younger siblings. See chap. iv, pp. 57–62.

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rewarded for aggression, instead of learning to stop teasing as his would-be teacher wished.

A Kwoma teacher scolds his pupils even more frequently than he punishes them, and uses this technique under similar circumstances. In fact, in all the cases that I observed of a teacher inflicting physical pain on pupils, he also scolded them. Scolding, like physical punishment, is employed by the teacher after the pupil has made a wrong or a not right response, and it can be presumed to operate psychologically in the same manner, except that the drive employed is acquired rather than basic.

Scolding acquires its motivational power in the following way. One of the most common phrases used by a Kwoma teacher in scolding a pupil is *kafwa sek otato*, "you have behaved badly." *Kafwa sek* is a modifier which is applied to rotten meat, to feces, to food "poisoned" by sorcery, as well as to bad behavior. Thus these words are associated with things which are disgusting or dangerous—things which all children have learned to avoid because of the pain which is inherent in such objects, because they have been punished for touching or eating them, or both. Furthermore, since a pupil is always scolded while he is being punished, these words come to symbolize a beating as well, and thus gain the power to evoke feelings of fear.

A second phrase frequently used by Kwoma teachers in scolding a pupil is *karaganda yikafa*, "little child" or "infant." This phrase implies that the pupil is behaving like an infant. It is the antonym of *harafa ma malaka*, "big older brother man," which is used for praise. Like *kafwa sek*, this phrase is used during physical punishment frequently enough so that it gains a strong fear potential. In addition, it is used in many contexts in which children are barred from doing what they would like to do. Thus the phrase comes to mean the denial of privileges. The fact that Kwoma children will mutilate their penises and willingly undergo scarification in order not to be classified as *karaganda yikafa* indicates the motivational power of this concept.

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121 • 861 The following case illustrates the manner in which scolding is used by Kwoma teachers. One morning Kum defecated in the path near his house. His co-mother, Kaya, found out what he had done and began to scold him for it: "You little baby (*karaganda yikafa*), you know better than to defecate in the path. I should beat you for it. Come and clean it up." Kum, instead of heeding her, ran away and hid in the bushes. After she had repeatedly called for him to return, she sent Gwiyap and Mey to search for him, but they could not find him. He waited until the hue and cry had subsided and then returned to the house. By this time the mess had been cleaned up and Kaya was so worried that he might be lost that she said no more about his misdemeanor (in my presence, at least). For the remainder of my stay at Kwoma, Kum did not defecate again in the path, but properly went to the latrine.

It can be seen from the above case that scolding apparently operates in a manner very similar to that of punishment. The motivation was the acquired drive of fear evoked by scolding; the response was running away; the cue was the memory of having defecated in the path, Kaya's presence, and her words; the reward was a reduction in fear. As with the cases of physical punishment, the primary habit learned was running away, and the right habit of defecating in the latrine was only subsequently reinforced by the reduction in the fear of being scolded.

The above case is not typical, in that Kum's response was to run away from scolding. Since running away takes some effort and since it is more difficult to get out of earshot than out of reach, this response is not as strongly reinforced as a reaction to scolding as it is to physical punishment, and Kwoma children normally learn by trial and error the more adaptive habit of waiting until the teacher stops scolding them. They also learn not to talk back, for this tends to lengthen the duration of the scolding and sometimes even leads to a beating. The following case will illustrate this type of response to scolding.

One afternoon when Kaya was sitting by her fire making

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sago briquettes, she asked Mey to pass her the two sticks which Kwoma housewives use to stir and ladle the thick gruel. Mey brought her two old sticks which she had long since discarded rather than the desired ones. She made Mey take the wrong ones back and get the right ones and began scolding him for his inattention and stupidity. Mey stood looking sullen and sheepish, and heard out her tirade. In this case the drive was anxiety evoked by the scolding; the response was looking sullen and sheepish and listening; the cues included being told to get stirring sticks and the memory of having brought his mother the wrong ones; the reward was reduction of fear (after she stopped scolding him). Thus listening and not talking back, rather than running away, was the response reinforced in this case.[24] The right response, of paying attention when spoken to, would be learned by Mey when on the next occasion he was asked to do something by his mother, did it correctly, and was not scolded for it.

Threatening is the third technique of motivating pupils employed by Kwoma teachers. A threat, like scolding, activates the acquired drive of fear in the pupil, but it differs from scolding in that it precedes the wrong or not right response. A threat is an "if . . . then" statement—"if you do such and such, then I will scold or beat you." Threats are used by Kwoma teachers in situations where they foresee that the pupil is likely to make a wrong response, either because the pupil is beginning to make such a response or because the teacher's knowledge of the pupil's habits suggests that he may do so. Kwoma teachers employ the technique of threatening as widely as scolding although perhaps not as frequently, since it is usually more difficult to predict a wrong response than it is to observe one.

Threats, like scolding, depend for their motivational power upon the acquired drive of fear. The phrase most commonly employed by the Kwoma teacher when threatening a pupil is *anafa fiju*, "I will beat you." *Fiju* is the term employed for all types of physical violence and injury. It has

[24] Unfortunately I observed no case of a child being specifically scolded or punished for talking back, but informants stated that this did occur.

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121 861 [192] [196] the meaning of fighting, beating, spearing, and killing. *Fiju* was the word used to denote the fight between Daw and Kwal in which the latter received a bad scalp wound; to denote Mey's action when he struck Fit on the back with a burning firebrand; by hunters when they successfully spear and kill a pig; and to killing someone in a head-hunting raid and to in-group murder. From these contexts, many of which have been directly experienced and all of which are known to Kwoma pupils, it is evident that the threat *anafa fiju* should arouse anxiety. Furthermore, teachers usually carry out their threat by beating the pupil if he does not heed. From these two sources, therefore, a threat gains the power to evoke fear in the pupil.

The following case will serve to illustrate threatening as a technique of teaching. Kum, while playing under the porch at Mar's house one afternoon, picked up a broom and started carrying it outside. Kwiya and Awa, his older *sisters*, both noticed him and told him to put it down. Kum did not heed at first, but when Kwiya threatened to beat him unless he did so at once, he quickly dropped the broom. In this case the drive was the fear of being beaten; the response was dropping the broom, the cues were the instructions to drop the broom given by Kwiya and Awa, the sight of objects and people under the porch, the feeling of the broom in his hand, etc.; the reward was the reduction of the fear of being beaten. It can be seen that the effect of a threat on learning is somewhat different from the effect of punishment and scolding. In the first place, the right response is made immediately rather than on a subsequent occasion, and, in the second, the motivation is stronger, since a fear-evoking person is present when the pupil makes the right response and the reinforcement is consequently greater.[23]

121 626 602 Social control is largely effected by means of threats. In Kwoma the threat of breaking relationship is one of the more important techniques by which an adult can control the be-

[113] [23] The amount of reinforcement is probably a positive function of the strength of the drive. See C. L. Hull, "Outline of a Systematic Theory of Learning," sec. v, *Educational Psychology Yearbook* (in press).

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havior of a relative. The case of War and Gwiyap will serve to illustrate how this technique operates. Gwiyap had for some time been taking sago flour from the plot of his *maternal uncle*, Payap. War, Gwiyap's *paternal uncle*, discovered this and told him to stop. He explained that he was more closely related to Payap than was Gwiyap. Gwiyap chose to argue this point and tried to maintain his claim, whereupon War threatened to break relations with him. In response to this threat Gwiyap turned over the privilege to War and paid him for the sago he had already taken.

In the above case the drive was fear of a broken relationship with War;[36] the response was giving up the privilege, paying War, and getting sago from another plot; the cues were War's words and the knowledge of having taken sago from Payap's plot; the reward was reduction of the fear of a broken relationship. Thus Gwiyap learned to behave correctly with respect to his kinship privileges and to heed the threats of his relatives. The fear of sorcery and of other retaliatory measures tends similarly to maintain correct social behavior. Theft, trespass, and breaking sex mores or rules inhibiting aggression, result in threats from those who suffer from these deviations from custom, whereas right behavior is continually reinforced by the reduction of fear implied by these threats.[37]

The fourth technique which teachers may use to motivate their pupils is to warn them. A warning is similar to a threat except that the source of the specified pain is some person or some event in the natural environment other than the teacher. A warning normally consists of two elements: a specification of the danger and its source, and instructions for escape from or avoidance of the danger. If the danger is imminent, the teacher normally introduces a warning by a sharp ejaculation—either *e ye!* (no!) or *sa!*, an expletive to call attention.

[36] As previously noted, a broken relationship involves removing the taboo which is implied by a safe kin relationship, and the loss of cooperation and support.

[37] A much more elaborate analysis of the relationship between threats and social control might be profitably made, but it is not within the scope of this chapter to do so.

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121 Warnings are extensively used by Kwoma teachers. A
• 961 Kwoma pupil in the course of his life is normally warned about all the dangers which inhere in the natural and social environment.

The following case exemplifies how a child is taught to avoid danger by means of the technique of warning. I had removed the shot from some twelve-gauge cartridges which had spoiled and lit the powder in them for the amusement of the natives. The powder exploded with a harmless puff. Kwos, seeing me do this, decided to try it himself. Mes, his older brother, saw him and warned him not to. He said that cartridges were dangerous and could kill people. Not heeding the warning, Kwos tried to light one. The cartridge did not explode at first so Kwos looked into it to see what the matter was. At that moment the powder exploded directly into his face, burning it so badly as to close one of his eyes. In this case the drive was pain from the explosion and burn; the response was withdrawal from the cartridge, and a visceral pain response; the cues were the cartridge and the words of warning which Mes issued; the reward was reduction in the pain of the explosion.[28]

It should be noted that stopping playing with the cartridge accorded with the instructions in Mes' warning. The effect of this experience on Kwos should have been to reinforce both heeding a warning and not playing with cartridges. There is evidence that exactly this did occur. Kwos did not play with cartridges again, and he heeded a warning not to walk around alone. Although he could barely see out of one eye, he came from his house to mine to get salve. His father came later and warned him not to return home alone lest he get lost. Kwos, heeding this warning, waited until his sister came and led him home.

Kwos' teachers were not satisfied with the lesson he learned from the explosion but scolded him in addition. Waramus, his father, told me in the presence of Kwos, "He will go

[28] The pain of the burn persisted much longer and reinforced whatever successful attempts were made to ease it, asking me for salve and applying it to his face being one of them.

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blind; he will never be able to see again; but it serves him right for not heeding his brother's warning." Kis, one of his *paternal uncles*, said to him, "You little feces-eater, that's what you get for not heeding your brother." The habit of heeding a warning thereby gained additional reinforcement as a result of the application of the technique of scolding.

The following case is one in which the warning concerned pain from another person rather than from an event in the natural environment, and in which the warning had been issued some time before the pain was experienced. Ham had been warned by his parents not to walk around in other people's houses. He had been told that, when visiting, he should sit down and remain seated, and that, if he did not do so, the owner of the house would be very cross with him. One day Ham started wandering about the porch of Wof's house. Wof shouted at him to sit down and then scolded him severely.[39] He accused the boy of trying to steal sorcery material and implied that only thieves walk around in other people's houses.

In this case the drive was fear aroused by Wof's scolding; the response was sitting down; the cues were the memory of the warning and the sight of another person's house; and the reward was the reduction of fear. Since the response reinforced in the parental warning corresponded with the instructions issued, that is, sitting down and not walking around, it would be expected that Ham's tendency to heed a warning was increased by this experience. Unfortunately, since I have no record of a warning issued to Ham after this experience, this prediction cannot be tested. About an hour after the experience, however, Ham obeyed with alacrity a command from his mother to pass sago fritters to his father. His alacrity may have been in part due to his recent experience, since both a warning and a command have the common element of instructions.

The only technique of motivating pupils used by Kwoma

[39] Wof was, of course, also a teacher in this case, and he used the technique of scolding. For the present purposes, Ham's parents will be taken as the teachers, using warning as a technique.

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[21] teachers which does not depend upon pain or fear is that of
• 86] inciting. This consists of presenting to the pupil the verbal symbols which have been associated with reward along with instructions as to how to achieve such reward. The following
[262] case will serve as an illustration. At a coöperative work feast
[177] given by Nambomai, my Yambon houseboy, one of the foods prepared was stewed apricots. Gwiyap took it upon himself to teach some of the adults present to eat this food, which was hitherto unknown to them. To do this he said: "It is good. It tastes like ripe bananas." Afolawanj, an old man who was somewhat of a clown, was thus tempted to try some, but he had no sooner taken a mouthful than he spit it out, and refused to eat any more.

In the above case the drive was the appetite evoked by Gwiyap's statement that the stewed fruit tasted like ripe bananas; the response was eating; the cues were Gwiyap's instructions to eat and the sight, smell, and taste of the fruit; the reward was absent. Since there was no reward in this sequence it could be predicted that learning would not take place. The fact that Afolawanj did not again try the fruit is evidence that this was indeed the case. It could also be predicted that Afolawanj would have a decreased tendency to follow Gwiyap's instructions,[30] but I do not know whether or not this was true.

War's attempt to incite Mes and Mar provides a more dramatic instance of the use of this technique. When the Hongwam were planning a head-hunting raid on the Sowal, War, who was the prime mover in the affair, spent a whole evening at the house tamberan inciting Mar and Mes to go on the raid. He described to them all the advantages that they would gain from taking a head—that all the girls would want to marry them, that they could become members of *Nokwi*, that they would gain high prestige so that their words would be listened to at the court meetings, that their

[113] [30] This follows from the principle of extinction. When a response is not followed by a reward, the connection between this response and the preceding cues is reduced in strength. See E. R. Hilgard and D. G. Marquis, *Conditioning and Learning* (New York, 1940), chap. v; N. E. Miller and John Dollard, *Social Learning and Imitation* (New Haven, 1941), chap. iii.

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relatives would be eager to help them in coöperative tasks, etc. He suggested to Mes that he take my shotgun along (he was acting as my shoot boy at the time) because with it he could be certain to kill someone and take his head. Mes asked me for the gun and was very disappointed when I refused. Mar, on the other hand, had seen several river natives hanged for participating in a head-hunting raid and had been so moved by the sight that he was afraid to go. He reacted to War's incitement by weeping and telling me that he guessed he could never be a man. Since traveling conditions prevented the raid from taking place, the correct response could not be made. A few days later a recruiter came to the tribe, and both Mar and Mes "signed on" for a three-year contract to work on a plantation.

Although the reaction of Mes and Mar indicates that War's incitement successfully induced motivation by evoking a complex of acquired drives and appetites based upon sex, hunger, fatigue, and prestige, his teaching was blocked because the correct response could not be made. Since both Mar and Mes said that they were going to work for the whites in order to gain prestige, so as to win an attractive wife, and in order to earn money to buy many wives, "signing on" may have been, in part at least, a substitute for going on the raid.[31]

Kwoma teachers do not always have to motivate their pupils in order to inculcate right responses, for this is frequently done for them either by others or by the natural environment. In such cases their task is to guide the pupil so that he makes the right response and to provide the proper cues.[32] Furthermore, even when the teacher himself motivates the pupil, the problem of guiding him still remains, and Kwoma teachers seldom simply motivate a pupil and

[31] Although it happens that the aim of the teacher was accomplished in neither of the above cases, this does not imply that the technique of inciting is not an effective means of teaching.

[32] Since responses and cues are so closely attached to one another in a habit, it has been deemed expedient to treat these two aspects of learning under a single heading, even though teachers may at times stress the cues and at times the responses.

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permit him to discover the reward by free trial and error. There are three techniques of guidance: leading, instructing, and demonstrating.

The most primitive technique by which a teacher can make his pupil perform the correct response is by leading. To do this the teacher physically limits the random responses of the pupil so that he makes the right response more quickly, or so that he is prevented from making wrong responses. Such guidance is used by the Kwoma primarily when the pupil has not yet learned to talk and therefore cannot follow instructions. The following case illustrates the use of leading. Njan, while lying in his mother's lap one afternoon, began to cry and struggle. His mother lifted him up to her breast, and, holding his head with one hand, directed her nipple into his mouth with the other. Njan began to nurse. Had his mother not directed his head, he would probably eventually have found her nipple as the result of random movements and satisfied his hunger. The mother, by holding his head, prevented him from making errors and thus forced him to make the right response more quickly. Informants stated that mothers taught their children to defecate in the latrine by leading them there and holding them in the proper position. These are the only situations observed in which Kwoma teachers employ the technique of leading, though there may well be others.

Verbal guidance or instruction is probably the most widely used of all teaching techniques. As indicated in the preceding analysis of punishment, scolding, threats, warnings, and inciting, instructions normally form a part of these techniques. In other words, teachers usually motivate and guide at the same time. On rare occasions, however, when the pupil is already motivated by some other agency, a teacher need simply help the pupil to make the right response, or not to make the wrong response, by instructing him.

The following case illustrates the use of instructions as a teaching technique. Fit was trying to light the fire in my cook house one afternoon. A strong wind was blowing, and the matches kept going out. Mar, who was watching him,

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told him to try lighting the fire on the leeward side. Fit followed the suggestion and was successful. Fit was already motivated to light the fire and was striving to do so. If left to himself he would probably eventually have succeeded, perhaps by hitting upon the response which Mar suggested, perhaps by discovering some other solution to the problem. Mar entered the situation as teacher by giving instructions which, when Fit followed them, achieved the desired goal.

Although the above analysis indicates the function of instruction as a teaching technique and the way in which it operates in a gross way, it does not explain why a pupil follows instructions. In other words, how did Fit know how to react to Mar's words, and why did he react at all? The answer to the first question depends upon verbal symbols and how a pupil learns their meanings. Although this is a most important part of the process of socialization, it lies beyond the scope of this inquiry. An answer to the second question—why does the pupil react to instructions at all?—can, however, be suggested. As has been observed above, instructions normally form a part of each of the teaching techniques which stress motivation. Therefore, since most teaching techniques result eventually in the learning of a rewarding habit, following instructions becomes a strongly reinforced habit. Words of instruction thereby come to have an acquired drive value.

Just as instructing depends upon the pupil's knowledge of language, so demonstrating, the third technique of guiding, depends upon the ability of the pupil to imitate. Miller and Dollard[33] have shown that conditions in our society are such that a child is more frequently rewarded and less frequently suffers pain if he behaves like certain people with whom he comes in contact, particularly his parents and older siblings, than if he makes responses which differ from theirs, and that therefore, by the principle of reinforcement, children learn to imitate. These investigators have also assumed that the conditions which lead children in our society to learn

[33] See N. E. Miller and John Dollard, *Social Learning and Imitation* (New Haven, 1941).

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to imitate are present in all societies, and in a chapter on diffusion have presented evidence which supports this assumption. The Kwoma are no exception to this rule. Most of the right and not wrong responses in Kwoma culture apply to all persons, and with respect to these responses a child will be rewarded for imitating anyone. Furthermore, although those responses which are right for only certain categories of persons—particularly those which depend upon the sex, age, or prestige position of the pupil—are both punished and not rewarded if the pupil imitates a person in another category than himself, he is rewarded if he imitates a person in his own category. Thus in the majority of cases a Kwoma is rewarded, and in only a minority of cases is he punished or not rewarded, for imitating. Since Miller and Dollard have presented imitation as a process of socialization in detail, it will not be further discussed here. It stands with teaching as one of the most important mechanisms by which culture is transmitted.

A Kwoma teacher takes advantage of the fact that his pupils have all learned to imitate, when he employs demonstrating as a technique of guidance. In using this technique the teacher gets the attention of the pupil, performs the right response, and then the pupil imitates him. Afok and Fokotay employed this technique when they were teaching Mes and Mar to play the sacred flutes. The two teachers would first play a piece while the pupils watched and listened. Then the two pupils would take the flutes and attempt to imitate them. The teachers would repeat their performance, and the pupils would try again.[24] This example reveals that this technique is similar to instruction, the difference being that the cues are the correct responses made by the teacher rather than his verbal representation of them.

Commanding, as a teaching technique, may be classed either as primarily motivating or as primarily guiding. A command consists of an implicit threat and explicit instruc-

[24] Afok and Fokotay did not depend entirely upon imitation but issued many instructions, scolded the pupils after errors and praised them after a correct performance.

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tions. Since both threats and instructions have been analyzed, it is not necessary to discuss commanding in detail, but it should be stated that it is an extremely important method of teaching.

Providing rewards, the third general category of teaching techniques, is also employed by the Kwoma. It consists of providing a reward after a pupil has made a right response. A teacher may use this technique after he has motivated and guided the pupil, or he may use it when either the motivation or the guidance or both have been supplied by some other agency. The general category of rewarding may be subdivided into helping, giving, and praising.

Kwoma teachers take advantage of the fact that a pupil can satisfy but few of his drives, either basic or acquired, without the aid of another person or persons.[35] Being helped is thus in many cases the *sine qua non* for achieving a reward. Teachers may, therefore, employ helping as a means of rewarding the right response of a pupil. They use this technique primarily to teach the pupil coöperative habits. In other words, teachers most frequently help a pupil after the pupil has helped them. The technique of helping is thus one of the important methods of transmitting that part of the culture which makes for in-group solidarity and reciprocity.[36]

Giving is closely allied to helping as a technique of reward, being used in the same coöperative context. If a teacher gives a pupil something, it is significant as a reward because the teacher has done the work of producing or otherwise obtaining the gift, and thus relieves the pupil of the necessity of doing the same himself. Gifts in Kwoma are of food, tools, or shell money. Barter and exchange are a form of reciprocal

[35] Malinowski has shown that all cultural habits are an integral part of institutions which imply the cooperative efforts of an organized group of persons for the satisfaction of a need. See B. Malinowski, "The Group and the Individual in Functional Analysis," *The American Journal of Sociology*, XLIV (1939), no. 6, pp. 932-54.

[36] Hull has suggested a psychological basis for this in the principle of reciprocal reinforcement. C. L. Hull, "Outline of a Systematic Theory of Learning," sec. ix, *Educational Psychology Yearbook* (in press).

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12.1
• 86 | 43 | gift giving in which both parties in the transaction play simultaneously the rôles of teacher and pupil.

[47 6] [46 1] The work bee is a good example of how both helping and giving reinforce coöperative habits. Yat gave a bee to get a log, from which he intended to make a slit gong, dragged from his garden to the house tamberan. He and his wife gathered a surplus of sago, traded some of it for fish, and then announced that they wanted help. Wof, War, Marok, Mar, Gwiyap, Mes, and Mey, as well as several of Yat's affinal relatives, answered the call, and this group spent the morning dragging the log to the house tamberan clearing. [57 4] When the task was completed, they went to Yat's house and ate the food which his wife had prepared.[37]

If Yat's helpers be thought of as the pupils, he taught them to help him by employing the technique of giving. Their drives were hunger and various appetites aroused by the anticipation of a feast; their response was coöperation in the log pulling; the cue was Yat's announcement; and their reward was the feast given by Yat. Yat thus taught people to help him by giving them a feast.

12.1
86 | If Yat be thought of as a pupil and the others as the teachers, helping rather than giving is the technique employed. The drive was the wish to get the log to the house tamberan (based upon the prestige which Yat would gain from having contributed a slit gong to the hamlet); the response was gathering food for a feast, announcing a work bee, and coöperating in the log pulling; the cues were those which indicated that the log was properly seasoned, and that there would be enough men in the hamlet who did not have

[37] It might be objected that this case does not represent socialization since it concerns adults who have presumably already learned coöperative work habits. Such an objection can be answered in the following ways. Although the increments in reinforcement get smaller and smaller with each successive reward, there is always a strengthening of the habit with each reward. Thus a habit theoretically can never be completely learned, and the process of socialization continues throughout the life of any individual. Secondly, if a habit does not lead to reward, it becomes extinguished. Thus reward is necessary to maintain habits as well as to teach them, and the maintenance of habits is as crucial to the process of socialization as is the initial learning of them.

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pressing work of their own to do; the reward was getting the log to the house tamberan plot. Yat's helpers thus taught him to give a feast by helping him.

Not giving and not helping are also techniques which are frequently used to arouse motivation. Kwoma teachers may punish a pupil by refusing to help him or give to him, after he has made a wrong response, or they may threaten him by promising not to help him or not to give to him if he should make a wrong response. The threat of breaking relationship is effective, not only because it implies aggression, but also because it implies withdrawal of support. Thus War's threat that he would break relationship with Gwiyap if he did not stop taking sago from Payap's plot, implied withdrawal of help and was effective in changing Gwiyap's behavior for this reason as well as because it implicitly threatened the kinds of aggression which kinship restrictions inhibit.

Praising is the third technique of rewarding used by Kwoma teachers. It is an acquired reward on the verbal level. As with other rewards, it may be employed either in conjunction with motivation and guidance or alone. A Kwoma teacher most frequently employs this technique when a pupil has performed an unexpectedly "good" response rather than merely a right one. Kwoma pupils are thus reinforced for excelling, for doing better than others, and this may explain in part why Kwoma individuals strive for superiority and prestige.

One of the phrases frequently employed in praising is *handombas*, "good." This word gains its power to reinforce habits by being frequently used in rewarding contexts. A Kwoma will pat his stomach after a good meal and say "*handombas*," or he will say it when he is greeting a friend, or he will use it to refer to someone or something that he likes. He also uses it to describe tasty food, good workmanship, or someone whom he regards highly. As a result, *handombas* comes to have a relaxing or acquired reward value,[35] and thus has the effect of reinforcing preceding habits when-

[35] See N. E. Miller and John Dollard, *Social Learning and Imitation* (New Haven, 1941), chap. iv.

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121 ever a teacher applies it to a pupil. Since, moreover, a
• 861 Kwoma teacher seldom punishes, scolds, or threatens a pupil at the same time that he praises him, *handombas* becomes a cue, reducing whatever anxiety may be present, and thus acquires further rewarding value.

[192] A second phrase, *harafa ma malaka*, is applied to men of
[554] high prestige who have many privileges that the ordinary person does not enjoy. It comes to mean, therefore, the right to go to the *Nokwi* ceremonies, to have many wives, to have many helpers at work bees, to be deferred to at court meetings, and to be so formidable that no one dare threaten or attack you. When a teacher applies this phrase to a pupil, it symbolizes an advance toward the attainment of these goals and is therefore rewarding. Furthermore, if a pupil is called *harafa ma malaka*, he is never called *karaganda yikafa*, "little child," at the same time, as these are antithetical concepts. Since the latter phrase is used to scold pupils, the former symbolizes non-scolding and thus gains further reward value.

Praising may be exemplified by the following case. Yat speared two pigs in one afternoon, a remarkable feat since a man will often hunt for weeks without success. When he returned to the hamlet, he joined a group of men who were sitting in the house tamberan and told them of his accomplishment. The men praised him for his prowess, referring to his act as *handombas* and to him as a *harafa ma malaka*. Thus Yat was rewarded by these words of praise for whatever hunting technique led to his success.

In conclusion, the following summary of the results of the preceding analyses may be made. The assumption that learning principles apply to the process of culture transmission at Kwoma has led to an organization of the data observed, so that some of the factors which permit, and some of the forces which compel, a Kwoma individual to learn his culture have been isolated and defined. Furthermore, the application of learning theory has brought certain essential details of the process of socialization into sharper relief than might otherwise have been the case. It is evident, also, from the above

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analysis, that Kwoma teachers have a practical knowledge of the way in which people learn, and use certain teaching techniques which are adapted on the one hand to the principles of learning and on the other to the culture and the necessity of transmitting it. Some of the techniques of teaching which the Kwoma employ stress motivation, others guidance, and still others reward, but all of them are in some way adjusted to the fact that learning only takes place when a person is motivated by a drive to make a response in the presence of cues and gains a reward for so doing. It was further shown that punishing, scolding, threatening, warning, and inciting were used by Kwoma teachers to motivate their pupils; leading, instructing, and demonstrating to guide them; and giving, helping, and praising to reward them.

In accordance with the hypothesis of the basic psychological unity of mankind, learning principles should apply to the process of culture transmission in all societies. Furthermore, since every society is faced with the problem of training the members of the oncoming generation, certain teaching techniques should be present in all cultures, and, certain conditions of social life being present in all societies, some of the techniques observed at Kwoma should be found in other cultures as well. Divergent historical processes and differing environmental conditions, however, may have produced techniques which are unique to a particular culture or to a certain area, may account for the absence of certain techniques in one culture which are found in others, and may have resulted in variations in the use of, and the emphasis placed upon, these techniques from culture to culture. When the data with which to test the above hypotheses have been gathered, it will be possible to construct a general theory of the process of socialization.

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The warnings which Kwoma teachers issue may be divided into two categories: realistic and unrealistic. A realistic warning is one which, if not heeded, will result in pain from the source specified, whereas an unrealistic warning is one which, if not heeded, will not result in pain from the source specified.

Realistic warnings are continually employed by Kwoma teachers concerning all the dangers which appear in the natural and social environments. To list all the warnings a person might receive in the course of his life would be to list much of the culture. It is expedient, however, to mention a few of these warnings in order to indicate how strongly the habit of heeding is built up in the Kwoma pupil. During the weaning period a child is warned not to go too far from home lest he get lost, not to eat certain poisonous foods lest he become sick or die, and not to take or destroy the property of others lest he be punished by the owners. During childhood he is warned not to be impolite to relatives lest they scold him, not to walk about in the houses of other people lest they punish him, not to go alone in the swamp lest he be killed by a wild pig or crocodile, and not to hurt a sibling seriously lest he thereby hurt himself. A boy is warned not to stare at the genitals of females lest they punish him, and not to have an erection in front of his *sister* lest she beat his penis with a stick. Girls are warned not to behave immodestly lest they be criticized. An adolescent boy is warned not to be lazy lest no woman choose him for a husband, not to be caught philandering lest he be attacked by the girl's relatives, not to rape a girl lest he be killed by her relatives, not to hunt pigs lest he be killed or injured, and not to trespass on the property of others lest he be forced to pay damages. An adolescent girl is warned not to be lazy lest no one marry her, and not to be unchaste lest her *brothers* refuse to help and protect her. Adults are also frequently warned by friends and relatives throughout their lives.

Whenever a Kwoma child does not heed one of the above-listed warnings, it is highly probable that he will experience the pain specified in the warning and that he will be scolded

121 861 or beaten by his teachers. Thus a strong habit of heeding whatever warning a teacher may issue is built up in every Kwoma individual. As a result, Kwoma teachers may warn 121 869 their pupils concerning dangers which do not exist and expect that their pupils will heed. This is in fact the case in the inculcation of supernatural beliefs. By means of warnings Kwoma teachers instill in their pupils an unrealistic fear of *marsalai*, ghosts, sorcery, and blood.[1]

[796] *Marsalai* are supposed to be huge monsters in the form of snakes or crocodiles which cause rain and wind storms, earthquakes, and other cosmic phenomena. They are supposed to 869 be present at the yam-cult ceremonies and to be responsible 796 for a plentiful yield of this crop. A child is first warned about [862] these monsters early in life. When a Kwoma mother weans her child she warns him not to suckle, lest he be injured by the *marsalai* which has now taken possession of her breast. She sometimes emphasizes this story by putting a bloodsucker [823] on her breast. During childhood a person is warned not to [821] go near or touch certain rocks and waterholes, lest the *marsalai* who dwell therein cause a storm or shoot a sago needle [796] into his foot in anger at being disturbed. He is also warned at this period not to go near the house tamberan during a cult ceremony lest the *marsalai* who are present kill him. He is told that the sounds[2] which he hears are the voices of these [798] monsters. When he is initiated at the beginning of adolescence, he is warned not to look up too suddenly at the cult figures which represent the *marsalai* lest the shock kill him.

869 795 Ghosts are believed to be the spirits of dead Kwoma who live on the outskirts of the tribal territory. Either as invisible shadows or in the form of a bird or an animal, they sometimes visit the hamlet of the living, particularly at night or when a death has occurred. It is believed that they sometimes attack a person, that they can cause accidents by frightening him, that they are eager to take souls to the land of the dead, and that they cause nightmares and fits of possession. Most warn-

[1] Kwoma have other supernatural beliefs, but these four provide the most important sources of unrealistic fear.

[2] Gongs, flutes, and bull-roarers.

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made to abhor milk at the time of weaning, and this abhorrence may generalize through the common term to the drinking of blood or to eating things believed to be contaminated with it.[6]

Imitation, as well as warning and generalization, is of considerable importance in the inculcation of supernatural beliefs. In the previous chapter it was indicated that imitation took its place along with teaching as one of the two most important mechanisms of culture transmission. Although imitation was not analyzed in detail, it was indicated that a Kwoma pupil is very frequently rewarded for behaving like other persons in the society, particularly those who are in the same sex, age, and kinship category as the pupil. Conversely, Kwoma pupils frequently do not gain rewards and do experience pain when they behave differently from these models. This is particularly true when the model gives evidences of being in a dangerous situation.[7] Thus to behave differently from a model comes to evoke anxiety in a Kwoma pupil, whereas to behave like one comes to have an acquired reward value.[8]

The following case will illustrate the way in which supernatural fears are transmitted by means of imitation. I started to whistle one evening while Mar and Mey were visiting me. Mar warned me to stop lest I attract ghosts, but I persisted. Mar then bolted for his house and Mey fol-

[6] Potable liquids such as coconut milk are classed with water, whereas undrinkable liquids such as milk, urine, and breadfruit sap are classed with blood.

[7] The following case will serve as illustration of pain suffered for not imitating. Awa became possessed one night and began to belabor her sister with a stick. Chinuwa caught hold of Awa to prevent her from harming anyone. Several children from the hamlet, hearing the commotion, gathered to see what was happening. Awa struggled against Chinuwa's restraining arms, finally broke free, and began to lay about her with the stick. All the children except Fit ran out of reach. He delayed for a moment and received a blow from Awa on his legs. He then ran away as the rest had done. Fit, by this event, was at first punished for not imitating the other children and then rewarded for imitating them by escaping further blows. Such a situation as this not infrequently presents itself to Kwoma children.

[8] See N. E. Miller and John Dollard, *Social Learning and Imitation* (New Haven, 1941).

761 A man of Dawus died this afternoon. He was an old man, so it was
534 taken as a matter of course. There was not much talk about sorcery,
[764] although it was agreed that he died of sunga (poison). Just after sundown, the gongs of all the house tamberans were tolled simultaneously, as a tribute. It was very effective. War and Way tolled the Rumbima gongs.

824 Kwiya had brought back the roots of mank, a swamp grown tree with aerial roots. The bark had been removed. She was whipping it against a tree and shredding it, taking out fine strong threads about eight feet long. War stopped in and took one of the roots.

602 I was down at Mar's when Wof began ranting about, and calling for Uka.
578 There was no firewood. Why hadn't she brought it? After scolding her, he gave her a couple of thumps on the back with the flat of his hand which I could hear distinctly. Uka began crying. Kwiya, Awambaka and Yawa were angry with Wof for this. Awambaka told me to go up and fight him. Mar and Owiyap said nothing.

861 Kum broke Owiyap's belt by playing with it. Owiyap, Kwiya, and Awa began scolding him for it. He was standing just outside the house. They told him to come and get beaten. Kum stood still leaning on a shovel and did not answer or move. Owiyap did not go after him.

124 I tried to get Awa to give me kinship terms this morning, but she wouldn't despite/half hour's cajoling and threatening. Tonight at her house, she gave them willingly.

586 Memoey came through on the way back from Tangwishamp. He had helped the "finish timers" carry their bones and had gone to collect pay for his no. 2 wife, Tangwahak who had left him to marry a Tangwishamp. The story is that Memoey beat up his no. 1 wife and no. 2 had run away. When he arrived at Tangwishamp, he found that she and her new husband had gone to Amaki to hide, so he did not get his pay.